

MEMORANDUM

TO: Mr. Aaron Nissen, Intermountain Power Service Corporation
FROM: Mr. Richard J. Monro, RJM Corporation
DATE: September 4, 1991
RE: Airflow Balancing

Based on our telephone conversation today, I thought the following comments might be helpful to you in your planning:

1. A baseline airflow balance test must be performed on all 48 burners. The baseline test will tell us airflow deviations between burners and between windboxes.
2. After the baseline test has been performed, burners within individual windboxes can be balanced on a windbox-by-windbox basis. Additional full 48 burner tests might be required, depending on individual windbox test results.
3. Airflow testing requires that the air doors and air vanes be set in the full-flow, axial-flow position. Adjustments for swirl control are made after airflow balances have been achieved.
4. Testing the inner air zone with the swirler installed introduces test error due to the rotational momentum of the air. Best test results will be achieved by testing the inner zone airflows without the swirler in place.
5. ADA insitu balancing addresses airflow problems symptomatically at the burner level. Ideally, these test techniques and balancing techniques are used for fine tuning the airflow balances. Gross airflow imbalances can be minimized, but a fluids model should then be performed and corrective actions installed during the next outage and final ADA airflow balancing achieved at that time.
6. Balancing using ADA insitu probe techniques are very effective in most applications. However, severe flow disturbances due to ductwork configurations usually require modeling to correct the airflows to the windboxes. A decision will have to be made upon completion of the baseline testing to determine if severe ductwork problems exist and the extent to which ADA balancing should be attempted, if at all.